cannot be properly applied against the claims of the present application. Further, Applicant's representative argued that a prima facie case of obviousness had not been established by the Examiner. Specifically, there was no evidence of motivation to make the proposed modification of the NASDAQ prior art. Further, the modified NASDAQ prior art fails to disclose or suggest all claim limitations. With regard to all independent claims, the modified NASDAQ prior art fails to disclose or suggest the steps of "dividing a total bandwidth resource into a plurality of component bandwidth resource units" and "representing a first component bandwidth resource unit with a bandwidth securitization instrument." Appl'n, Claims 3-6. Further, the limitations of the dependent claims have not been addressed by any of the issued Office Actions.

No agreements were reached. Applicant's representative agreed to file this Supplemental Response to address the arguments made during the interview, and to provide additional information for Examiner Luther.

2. Nonanalogous Art

Applicant respectfully submits that the NASDAQ prior art is non-analogous art to the claimed invention. The NASDAQ prior art relates to an the NASDAQ market; specifically, it relates to buying, selling, and trading securities. See Appl'n, Pages 32-38. The claims of the instant application, by contrast, are directed to methods for assigning a value to a bandwidth securitization instrument (i.e., an instrument that represents a component unit of a total bandwidth resource). The problems associated with buying, selling, and trading securities are considerably different from those associated with assigning values to bandwidth securitization instruments.

In general, a two step test has been developed to determine whether a particular reference is within the appropriate scope of the prior art. First, it must be determined whether the reference is within the field of the inventor's endeavor. Second, assuming the reference is outside that field, it must be determined whether the reference is "reasonably pertinent to the particular problem with which the inventor was involved." In re Deminiski, 796 F.2d 436, 442 (Fed. Cir. 1986); see also In re Clay, 966 F.2d 656, 659 (Fed. Cir. 1992).

In this regard, the Federal Circuit has stated:

> Patent examination is necessarily conducted by hindsight, with complete knowledge of the applicant's invention, and the courts have recognized the subjective aspects of determining whether an inventor would reasonably be motivated to go to the field in which the examiner found the reference, in order to solve the problem confronting the inventor. . .. [I]t is . . .. -- in other words, common sense -- in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor. . . . The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness.

In re Oetiker, 977 F.2d 1443, 1447 (Fed. Cir. 1992).

In many cases, a prior art reference appears to be related to the general subject matter of a claimed invention, but when the two-part test recited above is applied, the reference is found not to be analogous art. See, e.g., Wang Laboratories, Inc. v. Toshiba Corporation, 993 F.2d 858, 864 (Fed. Cir. 1993) ("The [prior] art is not in the same field of endeavor as the claimed subject matter merely because it relates to memories. It involves memory circuits in which modules of varying sizes may be added or replaced; in contrast, the subject patents teach compact modular memories."); In re Clay, 966 F.2d 656, 659 (Fed. Cir. 1992) (holding that the prior art reference was not in the inventor's field of endeavor merely because the prior art and the claimed invention both related to the petroleum industry); Oetiker, 977 F.2d at 1447 (holding that hook and eye fastener used in clothing was non-analogous art to a hose clamp application, thereby, rejecting the PTO's argument that all hooking problems are analogous); Ryko Manufacturing Co. v. Nu-Star, Inc., 950 F.2d 714, 716 (Fed. Cir. 1991) (holding that to define the prior art as "automatic car washing systems is too precise to illuminate the obviousness inquiry" and redefining the endeavor of the claimed invention as "activation devices for [car washing] systems"); In re Stencel, 828 F.2d 751, 754 (Fed. Cir. 1987) (rejecting the argument that "patentability must be measured against all embodiments of drivers in the prior art").

Thus, in addressing the issue of whether the NASDAQ prior art is analogous art, a number of threshold issues must be satisfied. First, the relevant art or field of endeavor for the claims of the application is established. Next, the inquiry analyzes whether the NASDAQ prior art is directed to that field of endeavor. Lastly, if the NASDAQ prior art is not directed to that field of endeavor, the question becomes whether the NASDAQ prior art is reasonably pertinent to the particular problems with which the inventor was involved. Here, the evidence indicates that the NASDAQ prior art is not analogous art for at least the reasons that the relevant art is

bandwidth resources; the NASDAQ prior art is not directed to that field of endeavor; and the NASDAQ prior art is not reasonably pertinent to the particular problems with which Applicant was involved.

a The Relevant Art for the Claimed Invention Is Bandwidth Resources.

The present application clearly is directed to the field of bandwidth resources,[1] including selling bandwidth resources. See Appl'n, Page 31, Lines 9-19 ("The present invention deals with creating a coherent pricing model for on-line distribution, which accounts for bandwidth utilization, maximizes pricing options and efficiency for sellers and buyers, and, additionally, as a result of the process of trading and pricing bandwidth options, ensures that usage of the limited bandwidth is orderly. . . . The distinctive features of the present invention . . . is the nature of the commodities being traded, bandwidth, and the unbounded potential of derivative copies of copyrighted works."; Appl'n, Page 38, Lines 13-16 ("It is an object of the present invention to create a trading instrument which will break bandwidth resources into discrete, usable component pieces, and allow an electronic market system to set a price for the scarce commodity which sets an equilibrium level of supply and demand.").

b. The NASDAQ Prior Art Is Not Directed To the Allocation of Bandwidth Resources.

Nowhere does the NASDAQ prior art indicate or suggest that it is directed to bandwidth resources. The NASDAQ market is "an exchange that trades in a finite number of 'titles' or stock certificates, whereas the present invention is concerned with the potential of an infinite number of 'titles' made up of digital bits – each derivative copy having the same potential commercial value as the original master copy that was intended for trade." Appl'n, Page 32, Lines 6-10. Thus, the NASDAQ prior art is apparently directed to problems related to the exchanging titles or stock certificates.

While the NASDAQ prior art involves exchanging titles between parties, this alone does not support the finding that the NASDAQ prior art is directed to the inventor's field of endeavor. See, e.g., Clay, 966 F.2d at 659 (holding that prior art patent is not within scope of

[1] In the present application, Applicant uses the term "bandwidth" in its traditional meaning, which is bits/second.

endeavor merely because said patent and the claimed invention both related to the petroleum industry); Wang, 993 F.2d at 864; Oetiker, 977 F.2d at 1447; Ryko, 950 F.2d at 716; Stencel, 828 F.2d at 754. For at least these reasons, it is respectfully submitted that the NASDAQ prior art and the claimed invention are directed to divergent fields of endeavor.

c. The NASDAQ Prior Art Is Not Reasonably Pertinent To The Problem Which Applicant Addressed.

Since, as discussed above, the NASDAQ prior art is outside the inventor's field of endeavor, the next issue is whether the NASDAQ prior art is reasonably pertinent to the particular problem with which the inventor was involved. Among other things, Applicant has developed an improved "coherent pricing model for on-line distribution, which accounts for bandwidth utilization, maximizes pricing options and efficiency for sellers and buyers, and, additionally, as a result of the process of trading and pricing bandwidth options, ensures that usage of the limited bandwidth is orderly." Appl'n, Page 31, Lines 9-13.

In contrast, the NASDAQ prior art is not concerned with these or any such related problems. The NASDAQ prior art is directed to neither the problem of ensuring that the usage of limited bandwidth resources is orderly. Instead, the NASDAQ prior art is concerned with exchanging titles or certificates.

In view of the above, it is respectfully submitted that the NASDAQ prior art is non-analogous to the claimed invention. Since the NASDAQ prior art is not analogous art, it is not within the "scope and content" of the prior art. Graham v. Deere, 383 U.S. 1, 17 (1966). Thus, the NASDAQ prior art has no bearing on the obviousness of the patent claims. Jurgens v. McKasy, 927 F.2d 1552, 1559 (Fed. Cir.), cert. denied, 112 S. Ct. 281 (1991) (reference which is not analogous art, "has no bearing on the obviousness of the patent claim."). Thus, Applicant is respectfully requests that the Examiner reconsider the rejections in light of the fact that the NASDAQ prior art is non-analogous art. Moreover, because the NASDAQ prior art is non-analogous art, it should not be used in whole or in combination with other references to form the basis of obviousness rejections.

3. Prima Facie Obviousness

Assuming arguendo that the NASDAQ prior art could be properly applied to the claims of the present invention, Applicant maintains that the rejection is improper because a prima facie case of obviousness has not been established. According to the MPEP, in order to establish a prima facie case of obviousness, at least two criteria must be met. First, there must be some motivation or suggestion to make the proposed combination or modification of the references. Further, the teaching or suggestion to make the claimed combination must be found in the prior art, and not based on the Applicant's disclosure (citations omitted). Additionally, the references, when combined, must teach or suggest all claim limitations.

Applicant submits that there is no evidence of motivation to make the proposed modification of the NASDAQ prior art. According to the MPEP,

> [i]n order to support a conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention obvious in light of the teachings of the references.

MPEP 2142 (citing Ex parte Clapp, 277 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985) (emphasis added). Further, "[w]hen the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper." MPEP 2142 (citing Ex parte Skinner, 2 USPQ2d 1788 (Bd. Pat. App. & Inter. 1988).

There is no explanation as to why the modification of the NASDAQ prior art is proper, and there is no suggestion in the NASDAQ prior art to make such a modification. As discussed above, the present invention is directed to creating a trading instrument that breaks bandwidth resources into discrete, usable component pieces, and allows an electronic market system to set a price for the commodity. See Appl'n, Page 38, Lines 13-16. The NASDAQ prior art, on the other hand, is directed to the NASDAQ Market, in which commodities are traded. In this market, a finite number of "titles" are traded. According to the specification, "NASDAQ is primarily an electronic bulletin board where market makers advertise at what prices they are willing to buy and sell a particular security. These market makers maintain an inventory of tradeable securities for sale to other parties, whether agency or principal-based transactions."

See Appl'n, Page 32. These commodities are not component parts of a larger whole; that is, each commodity traded as its own discrete, individual unit. There is no suggestion in the NASDAQ prior art that the commodities traded should be divided into a plurality of component units, such as is recited in claims 3-6.

Similarly the Office Action has failed to present the requisite "convincing line of reasoning" as to why such a modification to the NASDAQ prior art is proper. The Office Action seems to assert that because bandwidth is a commodity, a commodity not contemplated by NASDAQ, it would be obvious to trade it over a market exchange. It appears that the Office Action is relying on impermissible hindsight to make this rejection .

In addition, and as noted in the present application, NASDAQ is not an "anonymous marketplace." An "anonymous marketplace" is one where the parties do not know each other's identities. An example of such a marketplace is on the Internet. See Appl'n, Page 8, Lines 14-18 ("Further improvements of the present invention include the incorporation of retail models using well-known commodities exchanges to accomplish more efficient means of advertising, negotiating, and delivering digital goods in an anonymous marketplace as commonly characterized by such systems as the INTERNET."); Appl'n, Page 18, Lines 1-5 ("Issues of inventory, physical movement, and manufacture of goods are completely muted in digital exchanges, but are replaced by bandwidth utilization and efficiency, one-to-one connections, and one-to-many connections, i.e., seeking and reaching customers in an anonymous marketplace."); Appl'n, Page 57, Lines 13-20 ("Market participants will also be able to appeal to the anonymous parties that seek content through attractiveness of a 'site,' amount of processing speed available for distributing digital goods, staff responsible for purchasing or creating available content for downloads, the number of available repurchase rights of copyrighted works: 'electronic window-shopping' can be realized given heterogeneous networks, many digital goods, and the creation of bandwidth rights to complement digital watermarking systems."). Such an marketplace operates "without human intervention."

The NASDAQ market, on the other hand, is not anonymous. As Applicant has noted, in the NASDAQ market,

> Although NASDAQ can be thought of as an "electronic" market, it is electronic, for the most part, only in the sense that instead of shouting across floor at each other, traders generally advertise their price levels on a BBS (Bulletin Board System), which legally binds them to honor the price. They then field

> phone calls from traders at other member firms, who have seen the advertisements on the BBS, and agree to trades over the phone. Then, each side enters their transaction (if one side is a BUY, the other is a SELL) into on -site computers, which all feed into central mainframes and link up with each other. Many errors are introduced by this process, and an error report is produced at the end of the day, to be settled among the parties involved through after-hours reporting. So, there is really still a large low-tech component to NASDAQ which leads to discrepancies and inefficiencies.

Appl'n, Page 34, Lines 6-17. Thus, the NASDAQ market cannot be considered to be an "anonymous marketplace."

Therefore, in view of these differences, and in the absence of evidence to make the proposed modification, Applicant respectfully requests that the rejection be withdrawn.

Even assuming that there is evidence of motivation to make the proposed combination, the modified reference fails to disclose or suggest all claim limitations. Claims 3-6 recite, inter alia, the steps of "dividing a total bandwidth resource into a plurality of component bandwidth resource units" and "representing a first component bandwidth resource unit with the bandwidth securitization instrument." Appl'n, Claims 3-6. Solely as an aid for the Examiner, Applicant will provide illustrative definitions of these terms as defined in the specification.

Referring to the specification, "bandwidth resource" is generally defined as the available transmission resource for transmitting digital information packets (DIPs). See Appl'n, Page 53, Line 10 – Page 54, Line 18. ("[A]ny DIP can potentially be exchanged over vastly different lines between points. These may include copper, coaxial, fiber optic, etc. . . . Given the existence of other traffic over these lines, including telephony, the pricing of any DIP should necessarily include the price of the bandwidth resources necessary to transfer the DIP between at least two parties."; Appl'n, Page 54, Lines 19-21 ("The price of the bandwidth resources is, thus, proportional to the percentage of bandwidth allocated to the transfer of the DIP and inversely proportional to the duration of the transfer.") The total bandwidth resource may be divided "into discrete, usable component pieces," called "bandwidth component units." See Appl'n, Page 38, Lines 13-16 ("It is an object of this invention to create a trading instrument which will break bandwidth resources into discrete, usable component pieces, and allow an electronic market system to set a price of this scarce commodity which sets an equilibrium level of supply and demand.").

DIPs, which are known in the art, "create an advertising, distribution, and pricing device which allows for the dissemination of references to and description of particular titles available electronically." See Appl'n, Page 25, Lines 3-6. According to one embodiment of the present invention, DIPs may

> include at least two of any of the following three elements: a digital watermark key, a DIP header, and a bandwidth securitization instrument (bandwidth right). The DIP header describes the content, its address, pricing, and distribution. The bandwidth right is unique in its instance but also varies according to network bandwidth availability for a given period of time and the duration of the actual use of bandwidth on said network.

Appl'n, Page 56, Lines 15-23.

A "bandwidth securitization instrument," or a "bandwidth right," is an element of the DIP, and vary "according to network bandwidth availability for a given period of time and the duration of the actual use of bandwidth on said network" See Appl'n, Page 56, Lines 19-23; Page 25, Lines 20-22 ("Bandwidth rights price the commodity of bandwidth given the luxury item being sought (i.e., data or content).)"; Appl'n, Page 55, Lines 13-17 ("[M]eans for computing bandwidth securitization instruments take into consideration probability of failure to exercise an instrument, the time period for which said instrument is valid, intrinsic value relative to minimum standard bandwidth utilization for the line in question." These factors may be coupled with a convenience premium.).

In view of these definitions, Applicant respectfully submits that the modified NASDAQ fails to disclose or suggest all limitations of the claimed invention. Therefore, Applicant respectfully requests that the Examiner withdraw the rejection of these claims.

4. Claims 16-22

Claims 16-22 are dependent on claims 3-6, which Applicant maintains are nonobvious. According to the MPEP, "[i]f an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious." MPEP 2143.03, quoting In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore, Applicant respectfully requests that these rejections be withdrawn.

In addition, these claims contain limitations not disclosed or suggested by the modified NASDAQ prior art. For example, claims 17, 19-20, and 22 recite "wherein the

bandwidth securitization instrument is a cryptographically secure computer record." Appl'n, Claims 17, 19-20, and 22. Claim 21, which is not rejected or objected to by the Office Action, recites "wherein said step of assigning a value is performed according to the equation:

$$V = (1-Pf)(VI+VT+VC),$$

where V represents the value, Pf represents the probability of failure, VI represents the minimum standard price, VT is a value associated with the exercise period and VC represents a convenience premium." Appl'n, Claim 21. The NASDAQ prior art fails to disclose or suggest these limitations. Therefore, Applicant respectfully requests that these rejections be withdrawn.

CONCLUSION

Applicant maintains that this application is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that an interview with Applicant's representative, either by telephone or in person, would further prosecution of this application, we would welcome the opportunity for such an interview.

Respectfully submitted,

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